

In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A pharmaceutical composition for administration to a mucosal surface comprising a biologically active agent that is capable of generating a protective immune response in an animal and ~~a polycationic carbohydrate, wherein the polycationic carbohydrate~~ is a water-soluble alkylated chitosan selected from the group consisting of trimethyl chitosan with a degree of quaternization that is at least 20% and N-carboxymethyl chitosan or a salt thereof.

2. (Cancelled).

3. (Previously Presented) The pharmaceutical composition of claim 1 wherein the alkylated chitosan is trimethyl chitosan with a degree of quaternization that is at least 40%.

4. (Cancelled).

5. (Previously Presented) The pharmaceutical composition of claim 1 further comprising a cationic polypeptide, cationic polyamino acid, a quaternary ammonium compound or a mixture thereof.

6. (Previously Presented) The pharmaceutical composition of claim 1 further comprising a first material capable of forming particles, wherein the pharmaceutical composition is in the form of particles.

7-10. (Cancelled).

11. (Previously Presented) The composition of claim 6 wherein the particles comprise microspheres, microparticles or liposomes.

12. (Previously Presented) The composition of claim 11 wherein the particles are microparticles.

13. (Previously Presented) The composition of claim 6 wherein the first material capable of forming particles is a polymeric material which has a molecular weight of 100kDa or more.

14. (Previously Presented) The composition of claim 6 wherein the first material capable of forming particles comprises poly-(L-lactide).

15. (Previously Presented) The composition of claim 6 wherein the ratio of the first material capable of forming particles to the polycationic carbohydrate is from 99:1 to 9:1 w/w.

16. (Currently Amended) The composition of claim ~~37~~ 1 wherein the biologically active agent is capable of generating a protective immune response against tetanus, anthrax, diphtheria ~~diphtheria~~, or *Yersinia pestis*.

17. (Currently Amended) The composition of claim ~~46~~ 37 wherein the biologically active agent comprises a combination of the V antigen of *Y. pestis* or an immunologically active fragment thereof, and the F1 antigen of *Y. pestis* or an immunologically active fragment thereof.

18-19. (Cancelled).

20. (Previously Presented) The composition of claim 6 which further comprises a chemical compound selected from the group consisting of:

- (A) a polyamino acid,
- (B) a vitamin or vitamin derivative,
- (C) cationic pluronics,
- (D) a clathrate,
- (E) a complexing agent,
- (F) cetrimides,
- (G) an S-layer protein, or
- (H) methyl-glucamine.

21. (Previously Presented) The composition of claim 1 further comprising a cationic pluronic.

22. (Previously Presented) The composition of claim 20 which comprises particles of the cationic pluronic which are surface modified with the polycationic carbohydrate.

23-36. (Cancelled).

37. (Currently Amended) The composition of claim 6, ~~which further comprises a~~ wherein the biologically active agent ~~which~~ is able to produce an immune response against tetanus, diphtheria, anthrax, or *Yersinia pestis* in an animal to which it is administered.

38-39. (Cancelled).

40. (Previously Presented) The pharmaceutical composition of claim 1 wherein the alkylated chitosan is trimethyl chitosan with a degree of quaternization that is at least 60%.

41. (New) A composition comprising a biologically active agent and a polycationic carbohydrate, wherein the biologically active agent is an antigen capable of generating a protective immune response against tetanus, diphtheria, anthrax or *Yersinia pestis* when the composition is administered to a mucosal surface of the animal.

42. (New) The composition of Claim 41 wherein the polycationic carbohydrate comprises a water-soluble alkylated chitosan and a positively charged molecule.

43. (New) The pharmaceutical composition of claim 42, wherein the positively charged molecule comprises a cationic polypeptide, cationic polyamino acid or a quaternary ammonium compound.